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(FILE 'HOME' ENTERED AT 16:35:56 ON 18 AUG 2004)

FILE 'STNGUIDE' ENTERED AT 16:36:05 ON 18 AUG 2004

FILE 'HOME' ENTERED AT 16:36:10 ON 18 AUG 2004

FILE 'REGISTRY' ENTERED AT 16:36:18 ON 18 AUG 2004

L1 STRUCTURE uploaded

L2 0 S L1

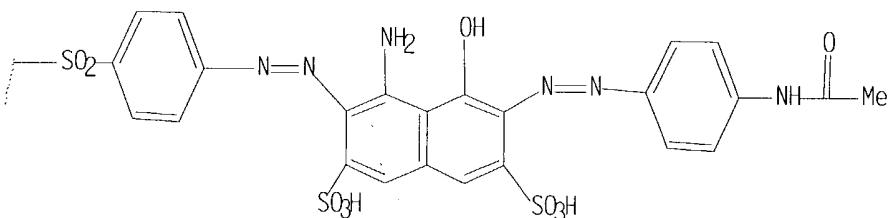
L3 1 S L1 FULL

FILE 'CAPLUS' ENTERED AT 16:36:56 ON 18 AUG 2004

L4 1 S L3

=> d que 14 stat

L1 STR



Structure attributes must be viewed using STN Express query preparation.

L3 1 SEA FILE=REGISTRY SSS FUL L1

L4 1 SEA FILE=CAPLUS ABB=ON PLU=ON L3

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L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:589281 CAPLUS

TITLE: Reactive blue dye containing a vinyl sulfone group and its preparation

INVENTOR(S): Oh, Sea-wha; Kim, Young-suk; Kim, Jinsoo; Kim, Tae Kyung; Kim, Sun Il

PATENT ASSIGNEE(S): Korea Research Institute of Chemical Technology, S. Korea

SOURCE: U.S. Pat. Appl. Publ., 6 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

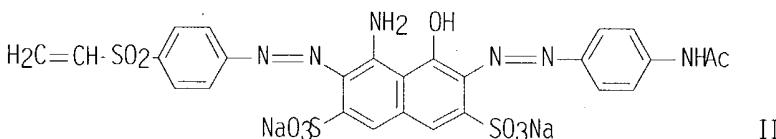
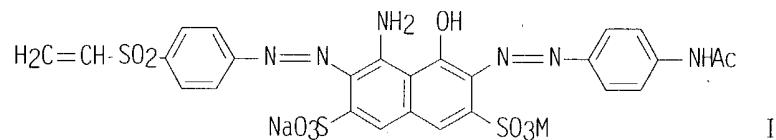
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004143106	A1	20040722	US 2003-661491	20030915
PRIORITY APPLN. INFO.:			KR 2003-3489	A 20030118

GRAPHIC IMAGE:



ABSTRACT:

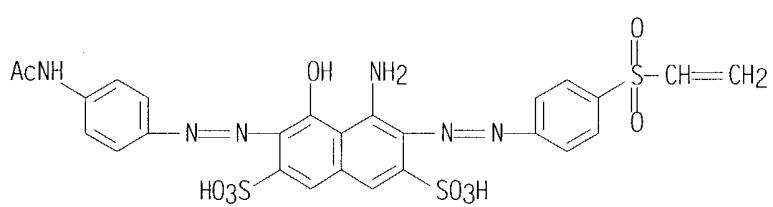
A reactive blue dye (I), wherein M = H or alkali metal atom, is prepared by (1) diazotization of 4-aminophenyl vinylsulfone and then first coupling with 1-naphthol-8-amino-3,6-disulfonic acid at 5-10° and pH of 1-2 and (2) diazotization of 4-aminoacetanilide and then second coupling with the product in (1) at 5-10° and pH of 6.5-7.5. Thus, 4-aminophenyl vinylsulfone was diazotized 1-naphthol-8-amino-3,6-disulfonic acid and then coupling with 1-naphthol-8-amino-disulfonic acid at 0-5°, and the product was coupling with diazotized 4-aminoacetanilide to obtain a reactive blue dye (II).

IT 724776-14-1P

RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of reactive blue dye containing a vinyl sulfone group)

RN 724776-14-1 CAPLUS

CN 2,7-Naphthalenedisulfonic acid, 3-[[4-(acetylamino)phenyl]azo]-5-amino-6-[[4-(ethenylsulfonyl)phenyl]azo]-4-hydroxy-, disodium salt (9CI) (CA INDEX NAME)



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(FILE 'HOME' ENTERED AT 16:35:56 ON 18 AUG 2004)

FILE 'STNGUIDE' ENTERED AT 16:36:05 ON 18 AUG 2004

FILE 'HOME' ENTERED AT 16:36:10 ON 18 AUG 2004

FILE 'REGISTRY' ENTERED AT 16:36:18 ON 18 AUG 2004

L1 STRUCTURE UPLOADED
L2 0 S L1
L3 1 S L1 FULL

FILE 'CAPLUS' ENTERED AT 16:36:56 ON 18 AUG 2004

L4 1 S L3
 E OH SEA/AU
L5 19 S E9
 E KIM YOUNG SUK/AU
L6 118 S E3
 E KIM JINSOO/AU
L7 29 S E3
 E KIM TAE KYUNG
 E KIM TAE KYUNG/AU
L8 69 S E3
 E KIM SUN IL/AU
L9 57 S E3
L10 281 S L5 OR L6 OR L7 OR L8 OR L9
L11 8 S L10 AND REACTIVE(L)DYE

=> d que l11 stat

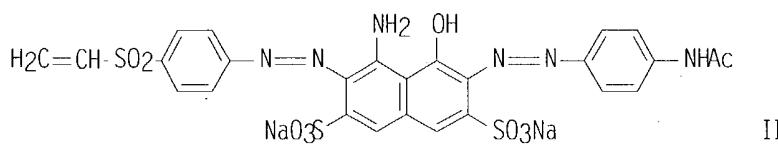
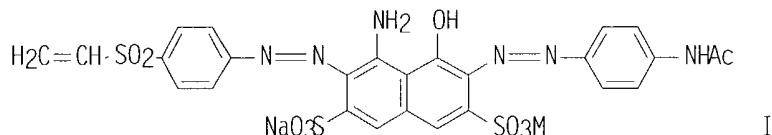
L5 19 SEA FILE=CAPLUS ABB=ON PLU=ON "OH SEA WHA"/AU
L6 118 SEA FILE=CAPLUS ABB=ON PLU=ON "KIM YOUNG SUK"/AU
L7 29 SEA FILE=CAPLUS ABB=ON PLU=ON "KIM JINSOO"/AU
L8 69 SEA FILE=CAPLUS ABB=ON PLU=ON "KIM TAE KYUNG"/AU
L9 57 SEA FILE=CAPLUS ABB=ON PLU=ON "KIM SUN IL"/AU
L10 281 SEA FILE=CAPLUS ABB=ON PLU=ON L5 OR L6 OR L7 OR L8 OR L9
L11 8 SEA FILE=CAPLUS ABB=ON PLU=ON L10 AND REACTIVE(L)DYE

=> d 1-8 bib abs

L11 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2004:589281 CAPLUS
 TI Reactive blue dye containing a vinyl sulfone group and its preparation
 IN Oh, Sea-wha; Kim, Young-suk; Kim, Jinsoo; Kim, Tae Kyung; Kim, Sun Il
 PA Korea Research Institute of Chemical Technology, S. Korea
 SO U.S. Pat. Appl. Publ., 6 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004143106	A1	20040722	US 2003-661491	20030915
PRAI KR 2003-3489	A	20030118		

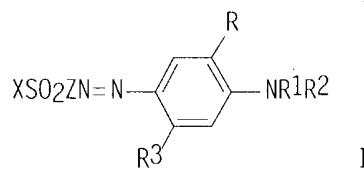
GI



AB A reactive blue dye (I), wherein M = H or alkali metal atom, is prepared by (1) diazotization of 4-aminophenyl vinylsulfone and then first coupling with 1-naphthol-8-amino-3,6-disulfonic acid at 5-10° and pH of 1-2 and (2) diazotization of 4-aminoacetanilide and then second coupling with the product in (1) at 5-10° and pH of 6.5-7.5. Thus, 4-aminophenyl vinylsulfone was diazotized 1-naphthol-8-amino-3,6-disulfonic acid and then coupling with 1-naphthol-8-amino-disulfonic acid at 0-5°, and the product was coupling with diazotized 4-aminoacetanilide to obtain a reactive blue dye (II).

L11 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:555585 CAPLUS
 DN 137:126419
 TI Disperse-reactive azo dyes containing
 acetoxyethylsulfonyl or vinylsulfonyl groups and their production
 IN Oh, Sea Wha; Shin, Seung Rim; Kim, Tae Kyung;
 Kim, Sun Il; Shin, Jong Il
 PA Korea Research Institute of Chemical Technology, S. Korea
 SO PCT Int. Appl., 29 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002057370	A1	20020725	WO 2002-KR69	20020116
	W: CN, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	EP 1352032	A1	20031015	EP 2002-715901	20020116
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	US 2004077846	A1	20040422	US 2003-466356	20030716
PRAI	KR 2001-2733	A	20010117		
	KR 2001-3009	A	20010118		
	KR 2001-4026	A	20010129		
	WO 2002-KR69	W	20020116		
OS	MARPAT 137:126419				
GI					



AB The invention relates to water-insol. disperse-reactive
 dyes (I; R, R1, R2, R3 = H, alkyl, alkoxy, cyanoalkyl,
 aminoacetyl; X = 2-acetoxyethyl, vinyl; Z = aromatic or benzothiazole
 connecting group) by diazotization of XS02ZNH2 and coupling with the
 appropriate substituted aniline. I have good fastness properties. In an
 example, orange (λ_{max} 459 nm) 2-acetoxyethyl 4-aminophenyl
 sulfone-N,N-diethylaniline was prepared in 88.5% yield.

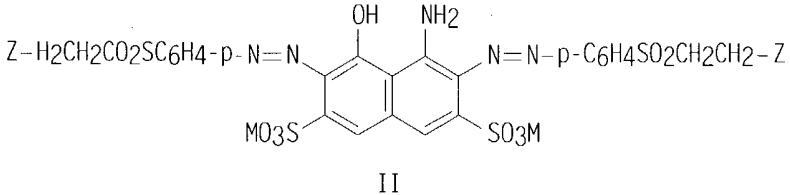
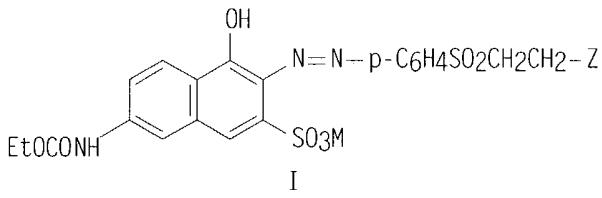
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:91900 CAPLUS
DN 135:138631
TI Reactive dyeing of cotton in water-organic solvent mixture
AU Lim, Yong-Jin; Kim, Tae-Kyung; Cho, Kwang-Ho
CS Department of Dyeing and Finishing, College of Engineering, Kyungpook
National University, Sankyu-dong, Puk-ku, Taegu, 702-701, S. Korea
SO Sen'i Gakkaishi (2001), 57(1), 77-80
CODEN: SENGA5; ISSN: 0037-9875
PB Sen'i Gakkai
DT Journal
LA English
AB Cotton fabric was dyed with a **reactive dye** in
water/CH₂Cl₂ 2-phase immiscible solvent media. To minimize dye
loss due to its hydrolysis, the **reactive dyeing** was carried out
in CH₂Cl₂ containing a small amount water. With only 2mL of water in 23mL of
CH₂Cl₂, 1g of cotton fabric could be dyed perfectly. The uptake ratio
increased greatly compared with that of normal **reactive dyeing**
in a water medium. It would seem that the hydrophobic solvent, CH₂Cl₂,
can assist the event dyeing as it disperses a small amount of **dye**
-dissolved water phase and conveys this water phase to the fabric entirely
and uniformly.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1999:626284 CAPLUS
 DN 131:258869
 TI Reactive black dye compositions for cellulose fibers
 IN Oh, Sea Wha; Kang, Myeong Nyeo; Kim, Tae Kyung; Song, Mi Kyung
 PA Korea Research Institute of Chemical Technology, S. Korea
 SO PCT Int. Appl., 18 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9948987	A1	19990930	WO 1999-KR146	19990326
W: CN, IN, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1066351	A1	20010110	EP 1999-909386	19990326
EP 1066351	B1	20020703		
R: CH, DE, GB, LI				
JP 2002507654	T2	20020312	JP 2000-537952	19990326
JP 3487827	B2	20040119		
US 6443997	B1	20020903	US 2000-646952	20001120
PRAI KR 1998-10610	A	19980326		
WO 1999-KR146	W	19990326		
OS MARPAT 131:258869				
GI				



AB A reactive black dye composition with excellent several fastnesses, dyeing levelness, reproducibility and dyeing yield comprises a mixture with a certain amount ratio of an orange reactive dye I and a black dye II (Z = OSO3M, OAc; M = alkaline metal atom).

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1999:626283 CAPLUS
 DN 131:258868
 TI Reactive black dyes containing acetoxyethyl sulfone
 moiety
 IN Oh, Sea Wha; Kang, Myeong Nyeo; Shin, Seung Rim; Kim, Tae
 Kyung; Yun, Sung Nyung
 PA Korea Research Institute of Chemical Technology, S. Korea
 SO PCT Int. Appl., 19 pp.
 CODEN: PIXXD2

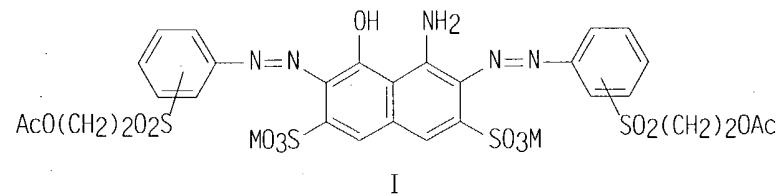
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9948986	A1	19990930	WO 1999-KR144	19990326
	W: CN, IN, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1066349	A1	20010110	EP 1999-909384	19990326
	EP 1066349	B1	20030611		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002507653	T2	20020312	JP 2000-537951	19990326
	US 6326474	B1	20011204	US 2000-646938	20001120
PRAI	KR 1998-10606	A	19980326		
	WO 1999-KR144	W	19990326		

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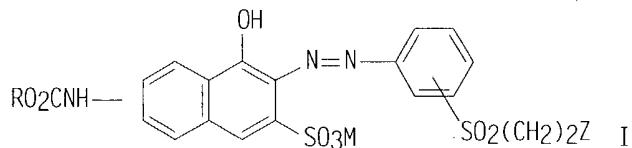


AB The black dyes I (M = alkaline metal atom) is characterized by lessening the loss of dyes in filtering process owing to the low solubility by introducing the aminophenyl- β -acetoxyethyl sulfone moiety, saving the cost for waste water treatment by using a small amount of salt in salting-out process and furthermore obtaining bright color with high dyeing yield and good substantivity.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1999:626282 CAPLUS
 DN 131:258911
 TI Reactive orange azo dyes containing vinyl sulfone
 groups and their production
 IN Oh, Sea Wha; Kang, Myeong Nyeo; Kim, Tae Kyung
 PA Korea Research Institute of Chemical Technology, S. Korea
 SO PCT Int. Appl., 16 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9948985	A1	19990930	WO 1999-KR142	19990326
	W: CN, IN, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1066348	A1	20010110	EP 1999-909382	19990326
	EP 1066348	B1	20030102		
	R: CH, DE, GB, LI				
	JP 2002507652	T2	20020312	JP 2000-537950	19990326
	JP 3487826	B2	20040119		
PRAI	KR 1998-10607	A	19980326		
	WO 1999-KR142	W	19990326		
OS	MARPAT 131:258911				
GI					



AB The present invention relates to reactive orange dyes containing vinyl sulfone groups and more particularly, to dyes which have 6(7)-(alkoxycarbonylamino)-4-hydroxy-2-naphthalenesulfonic acid as a chromophore and an aminophenyl β -substituted Et sulfone derivative as an azo coupler. The dyes (I; M = alkaline metal; R = C1-4-alkyl; Z = OSO3M, acetoxy) provide excellent fastness to light, washing, perspiration, and chlorine as well as better dyeing yield than other monofunctional reactive dye. Thus, 6-amino-4-hydroxy-2-naphthalenesulfonic acid was neutralized with LiOH and condensed with Et chloroformate to give a coupling component to which was then added diazotized 4-aminophenyl β -Et sulfone to provide an orange dye.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:626281 CAPLUS

DN 131:258910

TI Reactive blue dyes containing monochlorotriazine and acetoxyethyl sulfone groups and their production

IN Oh, Sea Wha; Kang, Myeong Nyeo; Kim, Tae Kyung

PA Korea Research Institute of Chemical Technology, S. Korea

SO PCT Int. Appl., 21 pp.

CODEN: PIXXD2

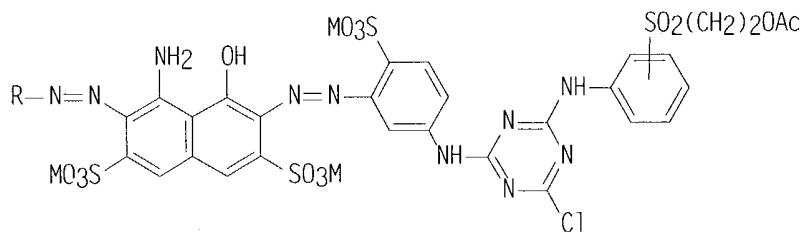
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9948984	A1	19990930	WO 1999-KR143	19990326
	W: CN, IN, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1071727	A1	20010131	EP 1999-909383	19990326
	EP 1071727	B1	20020612		
	R: CH, DE, GB, LI				
	JP 2002507651	T2	20020312	JP 2000-537949	19990326
	US 6307033	B1	20011023	US 2000-646936	20001120
PRAI	KR 1998-10609	A	19980326		
	WO 1999-KR143	W	19990326		

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AB Bifunctional blue reactive dyes and more particularly, dyes with monochlorotriazine and 2-acetoxyethyl sulfone reactive groups (I; R = C6H4-p-SO3M, M = alkaline metal atom) are prepared, which provide an excellent combination of properties in that (1) the introduction of aminophenyl β-acetoxyethyl sulfone group to the dye may minimize the loss of dye, since its low solubility in water lessens the amount of the remaining solution during filtration, (2) an easier salting-out process requires a smaller amount of salt during the process so that the costs for the treatment of waste water may be significantly reduced, and (3) a better dyeing yield with enhanced substantivity and better brightness in color. Thus, p-sulfanilic acid→1-naphthol-8-amino-3,6-disulfonic acid was prepared and coupled with the diazotized 1:1 adduct of m-phenylenediamine-4-sulfonic acid and cyanuric chloride and the resulting dichlorotriazinyl disazo compound was

condensed with 2-acetoxyethyl 4-aminophenyl sulfone to provide a blue reactive dye.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:626280 CAPLUS

DN 131:258909

TI Reactive red dyes containing monochlorotriazine and acetoxyethyl sulfone groups and their production

IN Oh, Sea Wha; Kang, Myeong Nyeo; Shin, Seung Rim; Kim, Tae Kyung; Song, Mi Kyung

PA Korea Research Institute of Chemical Technology, S. Korea

SO PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DT Patent

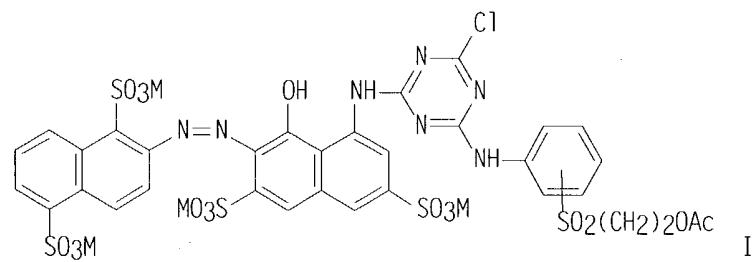
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9948983	A1	19990930	WO 1999-KR145	19990326
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	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1066344	A1	20010110	EP 1999-909385	19990326
	EP 1066344	B1	20020724		
	R: CH, DE, GB, LI				
	JP 2002507650	T2	20020312	JP 2000-537948	19990326
	US 6310187	B1	20011030	US 2001-646868	20010409
PRAI	KR 1998-10608	A	19980326		
	WO 1999-KR145	W	19990326		

OS MARPAT 131:258909

GI



AB Bifunctional red reactive dyes and more particularly, dyes with monochlorotriazine and acetoxyethyl sulfone reactive groups (I; M = alkaline metal atom) are obtained, which provide excellent combination of properties in that (1) the introduction of an aminophenyl β -acetoxyethyl sulfone group to the dye may minimize the loss of dye, since its low solubility in water lessens the amount of the remaining solution during filtration, (2) an easier salting-out process requires a smaller amount of salt during the process so that the costs for the treatment of wastewater may be significantly reduced, and (3) a better dyeing yield with enhanced substantivity and better brightness in color. In an example, a 1:1 condensate of 1-naphthol-8-amino-3,6-disulfonic acid was used as a coupling component

with diazotized 2-amino-1,5-naphthalenedisulfonic acid diazo component and the resulting dichlorotriazine azo **dye** was condensed with 2-acetoxyethyl -4-aminophenyl sulfone to provide a red **reactive dye**.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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